

We claim:

1. A method for improving yield in a crop exposed to water deficit by providing a transgenic seed for said crop wherein said transgenic seed has a recombinant DNA construct expressing a gene which encodes
 - 5 (a) a Hap3 protein having at least 80% identity to an amino acid sequence of SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:6 or SEQ ID NO:7 determined by an amino acid window of said sequence; or
 - (b) a Hap3 protein having an amino acid sequence identical to a consensus amino acid sequence of SEQ ID NO:8, SEQ ID NO:9 or SEQ ID NO:10.
- 10 2. A method of claim 1 wherein said crop is corn, soybean, canola, wheat, rice, cotton or grass.
3. A method of claim 1 wherein said recombinant DNA construct comprises said gene operably linked for transcription to a water-deficit-inducible promoter.
- 15 4. A method of claim 3 wherein said water-deficit-inducible promoter is a Rab-17, Hva22, Ca4H, Hsp17.5 promoter.
- 20 5. A method for improving water-deficit survivability of a plant comprising introducing into the genome of said plant a recombinant DNA construct expressing a gene which encodes
 - (a) a Hap3 protein having at least 80% identity to an amino acid sequence of SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:6 or SEQ ID NO:7 determined by an amino acid window of said sequence; or
 - (b) a Hap3 protein having an amino acid sequence identical to a consensus amino acid sequence of SEQ ID NO:8, SEQ ID NO:9 or SEQ ID NO:10.
- 25 6. Water-deficit-tolerant, transgenic, hybrid maize comprising a recombinant DNA construct expressing a gene which encodes

(a) a Hap3 protein having at least 80% identity to an amino acid sequence of SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:6 or SEQ ID NO:7 determined by an amino acid window of said sequence; or

(b) a Hap3 protein having an amino acid sequence identical to a consensus amino acid sequence of SEQ ID NO:8, SEQ ID NO:9 or SEQ ID NO:10.

5 7. Water-deficit-tolerant, transgenic soybean comprising a recombinant DNA construct expressing a gene which encodes

10 (a) a protein having at least 80% identity to an amino acid sequence of SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:6 or SEQ ID NO:7 determined by an amino acid window of said sequence; or

(b) a Hap3 protein having an amino acid sequence identical to a consensus amino acid sequence of SEQ ID NO:8, SEQ ID NO:9 or SEQ ID NO:10.

15 8. A transgenic seed having in its genome a recombinant DNA construct which expresses a gene which encodes a Hap3 protein having a consensus amino acid sequence of SEQ ID NO:10 and a gene imparting herbicide resistance.

20 9. A seed of claim 8 wherein said gene imparting herbicide resistance provides resistance to an herbicide selected from the group consisting of a glyphosate herbicide, a phosphinotricin herbicide, an oxynil herbicide, an imidazolinone herbicide, a dinitroaniline herbicide, a pyridine herbicide, a sulfonylurea herbicide, a bialaphos herbicide, a sulfonamide herbicide and a gluphosinate herbicide.

25 10. A seed of claim 8 wherein said genome further comprises a recombinant DNA construct which expresses a gene encoding an insecticidal protein.

11. A seed of claim 10 wherein said insecticidal protein is a delta endotoxin from *Bacillus thurengiensis*.

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12. A seed of claim 8 wherein said genome further comprises a recombinant DNA construct which is transcribed to RNA which forms gene silencing dsRNA targeted to a crop pest.

13. A plant produced from a seed of claim 8.